



## On the Track of Groupers: A Pilot Study for Acoustic Telemetry of Goldblotch Grouper (*Epinephelus costae*) in Gokova Marine Protected Area, Turkey

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### Abstract

There is little information on *E. costae* in the Mediterranean. IUCN Red List defines the species as Data Deficient (DD). On the other hand, it is one of the common groupers and economically important species for Gokova fishers. The goal of this study is to contribute to grouper fishery management by implementing acoustic telemetry method which is new technique for Turkey, for better understanding of the fish movements. Presented study was carried out at English Bay No Fishing Zone (NFZ) which is the biggest and well protected of the six NFZ within the Gokova MPA. The study focuses on the movements of *E. costae* within this NFZ. From inside the NFZ, 5 individuals caught by longline, sizing from 30.5 to 45.5 cm TL, were tagged and monitored within the range of 6 receivers. The receivers were deployed between 12 and 18 meter depth, attached to mooring set on bottoms at different habitats. Signals were collected by the receivers within approximately 300 meters diameter detection range during 5 months. Preliminary results showed that individuals (n=2) that were released at location different from where they were originally caught went back to their original site in less than two days, which corresponded to a displacement of approximately 3 km. Then they stayed at there with the other 3 individuals. No further movements have been detected, but the study is still ongoing. Expanding the scale of this study and a long term monitoring will provide more useful data to fill the gap on the migration pattern in terms of the management of *E. costae*.

### Keywords:

Grouper, *Epinephelus costae*, fisheries management, marine protected area, acoustic telemetry

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